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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,956	11/13/2003	Yukihiro Kitaichi	M1071.1868	6723

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EXAMINER

HAM, SEUNGSOOK

ART UNIT PAPER NUMBER

2817

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/705,956

Applicant(s)

KITAICHI ET AL.

Examiner

Seungsook Ham

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/13/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 8-10, 13, 15, 16, 17 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Chun et al. (US '239).

Chun et al. (figs. 1 and 2) discloses a dielectric filter comprising: a dielectric block 100 having resonator holes 140; external conductors 160 formed on surfaces of the dielectric block and a first surface of the dielectric block being used as an open circuit surface 150; a conductive cover 200 for covering the open circuit surface of the dielectric block; wherein the conductive cover has a bent portion having first and second parts arranged in 90° relative to each other, the first part 230, 240 being placed in contact with one of the external conductors, and the second part being arranged in parallel to the open circuit surface 220, and the conductive cover has at least one inwardly projecting portion 250 at a predetermined position along the bent portion.

Regarding claim 9, Chun et al. also shows the at least one inwardly projecting portion 250 (the projecting portion 250 that is near the ant. pad 130) disposed between the transmitting filter and the receiving filter.

Regarding claims 5 and 13, it is inherent from the device of Chun et al. that the inwardly projecting portion 250 increases the strength of the bent portion since it provides the extra support between the cover 200 and the dielectric block 100.

Regarding claim 15, the inwardly projecting portion 250 does not affect the coupling between adjacent resonator holes (see col. 3, line 64 – col. 4, line 2).

Claims 1-3, 5, 6, 8, 17, 18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamagata (US '910).

Yamagata (figs. 1A and 1B) discloses a dielectric filter comprising: a dielectric block 1 having resonator holes 11; external conductors 13 formed on surfaces of the dielectric block and a first surface of the dielectric block being used as an open circuit surface; a conductive cover 3 for covering the open circuit surface of the dielectric block; wherein the conductive cover has a bent portion having first and second parts arranged in 90° relative to each other, the first part 31 being placed in contact with one of the external conductors, and the second part being arranged in parallel to the open circuit surface (the cover surface that is located along the open circuit surface of the dielectric block), and the conductive cover has at least one inwardly projecting portion 33a, 33b at a predetermined position along the bent portion.

Regarding claims 2, 3, 6, and 18, the at least inwardly projecting portion has a rectangular cross-section, and positioned between two predetermined adjacent holes to reduce the coupling between the adjacent resonator holes (col. 3, lines 3-14).

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Regarding claims 5 and 13, it is inherent from the device of Yamagata that the inwardly projecting portion 33a, 33b increases the strength of the bent portion since it provides the extra support between the cover 3 and the dielectric block 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3, 4, 7, 11, 12, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chun et al. (US '239).

The shapes of the inwardly projecting portion are considered as a matter of design choice since the applicant failed to disclose the criticality of such shape, thus,

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one of ordinary skill in the art would shape the projecting portion having different cross sectional shapes to obtain a desire filter response.

Regarding claim 7, the location of the projecting portion is obvious as a matter of design choice since the projecting portion does not affect the coupling between the adjacent resonators.

Claims 2, 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chun et al. (US '239) in view of Yamagata (US '910).

Chun et al. does not show the inwardly projecting portion located between adjacent resonator holes to reduce the coupling between the adjacent resonator holes. Yamagata (figs. 1A and 1B) discloses a dielectric filter having inwardly projecting portion located in between the adjacent resonator holes to reduce the unwanted coupling between the adjacent resonator holes (col. 3, lines 3-14). Therefore, it would have been obvious to one of ordinary skill in the art to provide an inwardly projecting portion between the resonator holes in the device of Chun et al. to reduce the unwanted coupling between the adjacent resonator holes as taught by Yamagata.

Claims 4 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamagata (US '910).

The shape of the inwardly projecting portion is considered as a matter of design choice since the applicant failed to disclose the criticality of such shape, thus, one of ordinary skill in the art would shape the projecting portion having a triangular cross-section to obtain a desire filter response.

Conclusion

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Vangala (US '018) and Yorita et al. (US '955) disclose a dielectric filter having a cover; and

Zakman (US '916) discloses a conventional duplexer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seungsook Ham whose telephone number is (571) 272-2405. The examiner can normally be reached on Monday-Thursday, 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Seungsook Ham
Primary Examiner
Art Unit 2817

sh